

GLOSSARY

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ABANDON: To cease producing gas from a well when it becomes unprofitable. A wildcat (exploration) well may be abandoned after it has been proven nonproductive. Usually, some of the casing is removed and salvaged, and one or more cement plugs placed in the borehole to prevent migration of fluids between formations.

ACCUMULATION: One or more pools or reservoirs of petroleum that make up an individual production unit and defined by trap, charge, and reservoir characteristics. Two types of accumulations are recognized: conventional and continuous.

ACID NEUTRALIZING CAPACITY: The extent to which natural waterbodies are able to buffer atmospheric deposition of sulfate or nitrate particulate matter from air pollution emission sources.

ACRE-FOOT: A term used in measuring the volume of fluid. An acre-foot is the amount of fluid required to cover 1 acre to a depth of 1 foot, or 43,560 cubic feet (325,829 gallons).

ACTIVITY PLAN: Site-specific plan that precedes actual development. This is the most detailed level of BLM planning (also referred to as project-level or implementation-level planning).

ADDITIONALITY: The conservation benefits of compensatory mitigation are demonstrably new and would not have resulted without the compensatory mitigation project. (adopted and modified from BLM Manual Section 1794).

AIR QUALITY: Air quality is based on the amount of pollutants emitted into the atmosphere and the dispersion potential of an area to dilute those pollutants.

AIR QUALITY RELATED VALUE (AQRV): A resource identified by the Federal Land Management Agency for one or more Federal areas that may be adversely affected by a change in air quality. The resource may include visibility or a specific scenic, cultural, physical, biological, ecological, or recreational resource identified by the FLM for a particular area. AQRV impacts may also include sulfur, nitrogen, acid deposition, and lake acidification.

ALLELOPATHY: The inhibition (by selective metabolic discharge) of a plant by another plant (Radosevich et al. 2007).

ALLOTMENT: An area of land where one or more livestock operators graze their livestock. Allotments generally consist of BLM-administered lands but may also include other federally managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

ALLOTMENT CATEGORIZATION: The grouping of livestock grazing allotments into the categories “M” (maintain current satisfactory condition), “T” (improve current unsatisfactory condition), and “C” (manage custodially while protecting existing resource values).

ALLOTMENT MANAGEMENT PLAN (AMP): A written program of livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment.

ALLOWABLE SALE QUANTITY (ASQ): The gross amount of timber volume, including salvage, that may be sold annually from a specified area over a stated period in accordance with the management plan.

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ALLUVIUM: General term for debris deposited by streams on riverbeds, floodplains, and alluvial fans, especially deposits brought down during a flood. Applies to stream deposits of recent time and does not include below water sediments of seas and lakes.

AMENDMENT (PLAN): The process for considering or making changes in the terms, conditions, and decisions of approved RMPs or Management Framework Plans using the prescribed provisions for resource management planning appropriate to the proposed action or circumstances. Usually only one or two issues are considered that involve only a portion of the planning area.

AMENDMENT (SOIL): Any material (e.g., gypsum or compost) used to improve soil properties for plant growth.

AMERICAN INDIAN TRIBE: Any American Indian group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status.

ANALYSIS OF THE MANAGEMENT SITUATION: A comprehensive documentation of the present conditions of the resources, current management guidance, and opportunities for change.

ANIMAL UNIT: A standardized unit of measurement for range livestock or wildlife. Generally, 1 mature cow, 1 horse, 5 sheep, 9.6 antelope, 5.8 deer, or 1.9 elk, based on an average forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM): A standardized unit of measurement of the amount of forage necessary for the complete sustenance of one cow for 1 month; also the measurement of the permitted use of grazing one animal for 1 month.

ANNULUS OR ANNULAR SPACE: The space around a pipe in a wellbore, the outer wall of which may be the wall of either the borehole or the casing.

ANTICLINE: An arched, inverted-trough configuration of folded and stratified rock layers.

APPEAL: Application for review by a higher court.

APPLICATION FOR PERMIT TO DRILL DEEPEN OR PLUG BACK (APD): The United States Department of the Interior (USDI) application permit form to authorize oil and gas drilling activities on federal land.

AQUATIC: Living or growing in or on the water.

AQUIFER: A body of rock that is sufficiently permeable to conduct groundwater and to yield economically significant quantities of water to wells and springs.

ARCHEOLOGICAL RESOURCE/REMAINS: A term with legal definition and application meaning any material remains of human life or activities that are at least 100 years of age and of archeological interest.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): An area that needs special management attention to preserve historic, cultural, or scenic values; to protect fish and wildlife resources or other natural systems or processes; or to protect life and provide safety from natural hazards.

ARID: A condition of a region where precipitation is insufficient to support any but drought-adapted vegetation.

ARMOR: Protective material placed into streams or other waterbodies for the primary purpose of reducing sediment.

ARTESIAN: Groundwater with sufficient pressure to flow without pumping.

ASPECT: (1) the visual first impression of vegetation at a particular time or from a specific point or (2) the predominant direction of the slope of the land.

ASSESSMENT: The act of evaluating and interpreting data and information for a defined purpose.

ASSESSMENT UNIT: A mappable volume of rock within a total petroleum system (TPS) that encompasses accumulations (discovered and undiscovered) that share similar geologic traits and economic factors. Accumulations within an assessment unit should constitute a sufficiently homogenous population such that the chosen methodology of resource assessment is applicable. A TPS might equate to a single assessment unit. If necessary, a TPS can be subdivided into two or more assessment units in order that each unit is sufficiently homogeneous to assess individually. An assessment unit may be identified as conventional (if it contains conventional accumulations) or as continuous (if it contains continuous accumulations).

AUTHORIZED OFFICER (AO): The federal employee with the delegated authority to make a specific decision.

AUTHORIZED USE: Uses of public land that may be authorized include agriculture development; residential (under certain conditions), business, industrial, and commercial uses; advertising; research projects; State National Guard maneuvers; and motion picture filming. Recreational concessions are considered business uses and may be authorized by lease. Timber harvest, livestock grazing, mineral extraction, and special recreation events, among other uses, are authorized under other regulations and not under Section 302 of the Federal Land Policy and Management Act (FLPMA).

AVOIDANCE AREAS: Areas with sensitive resource values in which rights-of-way (ROWs) and surface-disturbing and disruptive activities would be strongly discouraged. ROW avoidance areas are to be avoided but may be available for location of ROWs with special stipulations/mitigation.

AVOIDANCE MITIGATION: Avoiding the impact altogether by not taking a certain action or parts of an action. (40 CFR 1508.20(a)) (e.g. may also include avoiding the impact by moving the proposed action to a different time or location.)

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BACK COUNTRY BYWAYS: Vehicle routes that traverse scenic corridors utilizing secondary or back country road systems. National back country byways are designated by the type of road and vehicle needed to travel the byway.

BANKHEAD-JONES FARM TENANT ACT OF 1937: This Act enabled the government to buy marginal farms and to put the farms back into grazing.

BASAL AREA: The cross-sectional area of a single stem, including the bark, measured at breast height (4.5 ft above the ground).

BASELINE: The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

BASIN: A closed geologic structure in which the beds dip toward the center; the youngest rocks are at the center of a basin and are partly or completely ringed by progressively older rocks.

BEDROCK: The solid, unweathered rock underlying soils.

BEST MANAGEMENT PRACTICES (BMPs): A suite of techniques that guide, or may be applied to, management actions to aid in achieving desired outcomes. BMPs are often developed in conjunction with land use plans but they are not considered a land-use-plan decision unless the land use plan specifies that they are

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mandatory. If they are not mandatory, they may be updated or modified without a plan amendment. BMP measures are applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts. BMPs are applied to management actions to aid in achieving desired outcomes for safe, environmentally responsible resource development by preventing, minimizing, or mitigating adverse impacts and reducing conflicts. BMPs become required actions when BMPs are incorporated into a permit by the proponent or BLM.

BIG GAME: Large wildlife species often hunted such as elk, deer, bighorn sheep, and pronghorn antelope.

BIODIVERSITY: The diversity of living organisms considered at all levels of organization including genetics, species, and higher taxonomic levels, and the variety of habitats and ecosystems, as well as the processes occurring therein.

BIOLOGICAL ASSESSMENT: Gathering and evaluating information on proposed endangered and threatened species and their critical habitat and proposed critical habitat. Required when a management action potentially conflicts with endangered or threatened species, the biological assessment is the method used by federal agencies to enter into formal consultation with the United States Fish and Wildlife Service (USFWS); it is used to describe a proposed action and consequences to the species potentially affected by the action.

BIOMASS: Vegetative material leftover from stand treatments. This term usually refers to material that can be gathered and transported to cogeneration plants and utilized for production of electricity.

BITUMINOUS: The most abundant rank of coal (synonymous with soft coal). It is dark brown to black and burns with a smoky flame.

BLOCK MANAGEMENT: Through cooperation with Montana Fish, Wildlife, and Parks (MFWP), a Memorandum of Understanding allows BLM, private landowners, and MFWP to close off some public lands administered by the BLM in exchange for opening up private lands to hunting. This is done on a rotating basis from year to year.

BLOOE PIT: The pit that receives cuttings and other discharges from a well drilled with air.

BLOWOUT: An uncontrolled expulsion of gas, oil, or other fluids from a drilling well. A blowout, or “gusher,” occurs when formation pressure exceeds the pressure applied to it by the column of drilling fluid and when blowout prevention equipment is absent or fails.

BLOWOUT PREVENTER: Equipment installed at the wellhead to prevent the escape of pressure either from the annular space between the casing and drill pipe or from an open hole during drilling and completion operations.

BOARD FOOT: The amount of wood contained in an unfinished board 1 in. thick, 12 in. long, and 12 in. wide; abbreviated bd ft (1,000 bd ft is written as 1 MBF and 1,000,000 BF is written as 1 MMBF).

BOND OR CORPORATE GUARANTEE: The use of corporate assets as part or all of the financial assurance for reclamation.

BRACKISH WATER: Water that contains relatively moderate concentrations of any soluble salts. Brackish water is saltier than fresh water but not as salty as salt water or brine water.

BRINE: Water containing relatively large concentrations of dissolved salts, particularly sodium chloride. Brine has higher salt concentrations than ordinary ocean water.

BRINE PIT: An excavated pit used to hold brine produced from a well.

BROWSE: As a verb, to consume or to feed on (as a plant); as a noun, the tender shoots, twigs, and leaves of trees and shrubs, often used as food by cattle, antelope, deer, elk, and other animals.

BUFFER ZONE:

- An area between two different land uses that is intended to resist, absorb or otherwise preclude developments or intrusions between the two use areas.
- A strip of undisturbed vegetation that retards the flow of runoff water, causing deposition of transported sediment and reducing sedimentation in the receiving stream.

BURNED AREA REHABILITATION: Efforts undertaken within 3 years of containment of a wildfire to repair or improve fire-damaged lands unlikely to recover naturally to management-approved conditions, or to repair or replace minor facilities damaged by fire.

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CAMBRIAN: The oldest of the periods of the Paleozoic Era; also the system of strata deposited during that period.

CANDIDATE SPECIES: Any species included in the Federal Register notice of review being considered for listing as threatened or endangered by the USFWS.

CANOPY: The continuous cover formed by tree crowns in a forest consisting of one or several layers.

CANOPY COVER: The percentage of ground area under an overstory vegetation that would not be impacted by raindrops falling straight down.

CARRYING CAPACITY: The maximum stocking rate possible without damaging vegetation or related resources.

CASING: Steel pipe placed in a gas well to prevent the hole from caving.

CASUAL USE: Any activity that does not cause appreciable surface disturbance or damage to lands, resources, and improvements. Examples include the use of hand tools to remove surface material (e.g., postholes, hand-line for fire control) or to collect mineral or vegetative specimens, off-road vehicle use contained in BLM land use plans, or livestock herbivory. It does not include occupancy where cumulative effects of activities result in more than negligible disturbance.

CATEGORICAL EXCLUSION: A category of actions (identified in agency guidance) that do not individually or cumulatively have a significant effect on the human environment and for which neither an environmental assessment nor an environmental impact statement (EIS) is required.

CENOZOIC: The most recent era of geologic history (65 million years ago to the present) during which the world's modern landforms, animals, and plants came into being.

CHANNEL: An open conduit either naturally or artificially created which periodically or continuously contains moving water or forms a connecting link between two bodies of water.

CHECKERBOARD PATTERN: One in which ownership of sections of land alternates between federal and other ownership, usually private. On a map with different colors denoting type of ownership, the pattern resembles a checkerboard.

CLAYEY: A soil containing more than 35 percent clay. The textural classes are sandy clay, silty clay, clay, clay loam, and silty clay loam.

CLIMAX: The culminating stage in plant succession for a given site where vegetation has reached a highly stable condition.

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CLOSED: Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs.

CLOSED AREA OR TRAIL: Designated areas and trails where the use of off-road vehicles is permanently or temporarily prohibited. The use of off-road vehicles in closed areas may be allowed only with the approval of the authorized officer (AO).

CLOSED MUD SYSTEM: A drill mud system that reuses or reclaims all the drilling fluid used. Oil-based mud systems are often closed mud systems.

CLOSED ROAD: A road or segment that is restricted from certain types of use during certain seasons of the year. The prohibited use and the time period of closure are specified.

COAL: A readily combustible rock containing more than 50 percent weight and more than 70 percent by volume of carbonaceous material including inherent moisture, formed from compaction and induration of variously altered plant remains similar to those in peat. Differences in the kinds of plant materials (type), in degree of metamorphism (rank), and in the range of impurity (grade) are characteristic of coal and are used in classification.

COAL BED NATURAL GAS (CBNG): A clean-burning natural gas found deep inside and around coal seams. The gas has an affinity to coal and is held in place by pressure from groundwater. Mining for coal bed natural gas involves drilling into coal seams and discharging large volumes of groundwater to release the gas. Commonly referred to as coal bed methane.

CODE OF FEDERAL REGULATIONS (CFR): The official, legal tabulation or regulations directing federal government activities.

CO-DOMINANT (FORESTRY): A tree whose crown helps to form the general level of the main canopy.

COLLABORATION: A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands. This may or may not involve an agency as a cooperating agency.

COLLUVIAL: Loose, incoherent geological deposits, which fell from or near the top, at the bottom of a slope or cliff.

COMMERCIAL FORESTLAND: Forestland that is producing, or has a site capable of producing, at least 20 cubic feet per acre per year of a commercial tree species.

COMMERCIAL THINNING: Any type of thinning producing merchantable material at least equal to the value of the direct costs of harvesting.

COMMUNITIZATION: The pooling of mineral acreages based on the spacing for a well or wells set by the state or BLM.

COMMUNITY: An assemblage of plant and animal populations in a common spatial arrangement.

COMMUNITY WATER SYSTEM: A public water supply that provides water on a year-round basis and has a minimum of 15 service connections or regularly serves at least 25 residents.

COMPACTION: The process of packing firmly and closely together; the state of being so packed; for example, mechanical compaction of soil by livestock or vehicular activity. Soil compaction results from particles being pressed together so that the volume of the soil is reduced. It is influenced by the physical properties of the soil, moisture content, and the type and amount of compacting effort.

COMPENSATORY MITIGATION: Compensating for the (residual) impact by replacing or providing substitute resources or environments (40 CFR 1508.20)

COMPENSATORY MITIGATION PROJECTS: The restoration, creation, enhancement, and/or preservation of impacted resources (adopted and modified from 33 CFR 332), such as on-the-ground actions to improve and/or protect habitats (e.g. chemical vegetation treatments, land acquisitions, conservation easements). (adopted and modified from BLM Manual Section 1794).

COMPENSATORY MITIGATION SITES: The durable areas where compensatory mitigation projects will occur. (adopted and modified from BLM Manual Section 1794).

Durability (protective and ecological): the maintenance of the effectiveness of a mitigation site and project for the duration of the associated impacts, which includes resource, administrative/legal, and financial consideration. (adopted and modified from BLM Manual Section 1794).

COMPLETION: The activities and methods to prepare a well for production and includes the installation of equipment for production from a gas well.

COMPOSITION (OF FOREST VEGETATION): The proportion of each tree species in a stand, expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

CONDITION OF APPROVAL (COA): Conditions or provisions (requirements) under which an APD or a sundry notice (SN) is approved.

CONFORMANCE: That a proposed action shall be specifically provided for in the land use plan or, if not specifically mentioned, shall be clearly consistent with the goals, objectives, or standards of the approved land use plan.

CONIFER: A tree of the order Coniferae with cones and needle-shaped or scale-like leaves.

CONIFEROUS: Pertaining to conifers, which bear woody cones containing naked seeds.

CONSERVATION STRATEGY: A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threats. Conservation strategies are generally developed for species of plants and animals that are designated as BLM Sensitive species or that have been determined by the USFWS or National Marine Fisheries Service to be federal candidates under the Endangered Species Act (ESA).

CONSISTENCY: The proposed land use plan does not conflict with officially approved plans, programs, and policies of tribes, other federal agencies, and state, and local governments to the extent practical within federal law, regulation, and policy.

CONTAMINATION: The presence of human-made chemicals or other alterations in the natural soil or water environment (e.g., pesticides, hazardous substances, petroleum, salts).

CONTIGUOUS: Lands or legal subdivisions having a common boundary; lands having only a common corner are not contiguous.

CONTINENTAL DEPOSITS: A sedimentary deposit laid down on land (whether a true continent or only an island) or in bodies of water (whether fresh or saline) not directly connected with the ocean, as opposed to a marine deposit; a glacial, stream, lake, or windborne deposit formed in a nonmarine environment.

CONTINUOUS ACCUMULATION: Common geologic characteristics of a continuous accumulation include occurrence down dip from water-saturated rocks, lack of obvious trap and seal, pervasive oil or gas charge, large aerial extent, low matrix permeability, abnormal pressure (either high or low), and close association with source rocks. Common production characteristics include a large in-place petroleum volume, low recovery

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factor, absence of truly dry holes, dependence on fracture permeability, and sweet spots within the accumulation that have generally better production characteristics but where individual wells still have serendipitous hit or miss production characteristics (Schmoker 2003).

CONTROLLED SURFACE USE (CSU): Use or occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. CSU is used for operating guidance, not as a substitute for NSO or timing stipulations.

CONVENTIONAL ACCUMULATION: The United States Geological Survey (USGS) has defined conventional accumulations “by two geologic characteristics: (1) they occupy limited, discrete volumes of rock bounded by traps, seals, and down-dip water contacts, and (2) they depend upon the buoyancy of oil or gas in water for their existence” (Schmoker and Klett 2003).

COOPERATING AGENCY: Assists the lead federal agency in developing an environmental analysis or EIS. The Council on Environmental Quality regulations implementing National Environmental Policy Act (NEPA) define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA. Any tribe or federal, state, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

CORRIDOR: A wide strip of land within which a proposed linear facility could be located.

COVER: Any form of environmental protection that helps an animal stay alive (mainly shelter from weather and concealment from predators).

COVER TYPE: The present vegetation composition of an area, described by the dominant plant species.

CRITICAL HABITAT: An area occupied by a threatened or endangered species “on which are found those physical and biological features: (1) essential to the conservation of the species, and (2) which may require special management considerations or protection” (as defined under the ESA of 1973).

CRITICAL HABITAT AREAS: Generally identified by the USFWS for endangered, threatened, or candidate species. The area of land, water, and airspace required for the normal needs and survival of a species. These areas contain physical and biological features essential to the conservation of the species, and which may require special management protection or considerations.

CROWN: The uppermost branches and foliage of a tree.

CROW RESERVATION: The Crow Reservation as established by the September 17, 1851, Ft. Laramie Treaty and by federal statutes and case law.

CRUCIAL HABITAT: Parts of the habitat necessary to sustain a wildlife population at critical periods of its life cycle. This is often a limiting factor on the population, such as breeding or winter habitat.

CRUCIAL WINTER RANGE: That portion of the winter range on which a wildlife species is dependent for survival during periods of heaviest snow cover.

CULTURAL RESOURCE: A term that includes items of historical, archeological, or architectural items; a remnant of human activity.

CULTURAL RESOURCE INVENTORY CLASSES:

- Class I, existing information inventory: a Class I inventory is most useful for gaining a comprehensive view of all the known archeological, historic, cultural, and traditional places within a large area, such as the area to be covered by a land use plan or an EIS. A Class I inventory is a professionally prepared study that includes a compilation and analysis of all reasonably available cultural resource data and literature and a management-focused, interpretive, narrative overview and synthesis of the data. The

- overview also defines regional research questions and treatment options. Existing cultural resource data are obtained from published and unpublished documents, BLM cultural resource inventory records, institutional site files, state and national registers, interviews, and other information sources. Class I inventories, which should have prehistoric, historic, and ethnological elements, are in large part chronicles of past land uses, and as such they should be relevant to current land use decisions. General information about sacred sites and other places of traditional cultural or religious importance to American Indians or other cultural groups (including TCPs as discussed in the 1998 National Register Bulletin No. 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*) should be included as much as possible in the inventory. Class I inventories are periodically updated, in both the compilation and the synthesis, to incorporate new data from Class II and Class III inventories, histories, oral testimony, and other sources. They can be used to develop regional research designs for resource evaluation. Maintaining current Class I inventories in GIS-compatible format is of critical importance for making cultural resources information readily available for research, planning, management, and compliance activities.
- Class II, probabilistic field survey: a Class II survey is most useful for improving cultural resource information in a large area, such as for planning or EIS purposes, in which insufficient systematic identification work has been done in the past. A Class II probabilistic field survey is a statistically based sample survey designed to aid in characterizing the probable density, diversity, and distribution of cultural properties in an area, to develop and test predictive models, and to answer certain kinds of research questions. Within individual sample units, survey aims, methods, and intensity are the same as those applied in a Class III survey. Class II surveys may be conducted in several phases using different sample designs to improve statistical reliability.
 - Class II surveys may be appropriate when comparing alternative locations for proposed undertakings. Class II surveys are generally not appropriate for determining specific effects of a proposed land use, except when the sample distribution and sample rate have proven to be sufficient to demonstrate that the specific environmental situations in the area sampled did not support human occupation or use to a degree that would make further field survey information useful or meaningful. Class II surveys may be appropriate when existing information about the project area or similar environments indicates that a properly designed sample survey would adequately address the relevant research questions about past human use of the area. Class II surveys are generally not appropriate where designing a sample and executing a discontinuous survey may prove more demanding and time-consuming than a continuous Class III survey.
 - Class II surveys may be appropriate for testing hypotheses about presence or absence of significant prehistoric and historic archeological and architectural properties, such as:
 - when the regional inventory suggests a significant correlation between certain environmental variables and particular significant property types, which can be tested through sampling the study area;
 - when comparative effects or cumulative effects assessments are needed for environmental documentation;
 - when Class I data are found to be biased or otherwise insufficient to allow for reasoned judgments during general land use planning or activity planning; and
 - when generating statistical data needed for developing and testing predictive models.

Class III, intensive field survey: an intensive survey is most useful when it is necessary to know precisely what historic properties exist in a given area or when information sufficient for later evaluation and treatment decisions is needed on individual historic properties. Intensive survey describes the distribution of properties in an area; determines the number, location, and condition of properties; determines the types of properties actually present within the area; permits classification of individual properties; and records the physical extent of specific properties.

CULTURAL RESOURCE OR CULTURAL PROPERTY: A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archeological, historic, or architectural sites, structures, or places with important public and

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scientific uses, and may include definite locations (sites or places) or traditional cultural or religious importance to specified social or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit.

CUMULATIVE IMPACT: The impact on the environment that results from the positive or negative impacts of an action when added to other past, present, and reasonable foreseeable future actions, regardless of what agency or person performed such action(s).

- D -

DECIBEL OR dB: A unit for measuring sound intensity, usually measured on the decibel A weighted scale (dBA) which approximates the sound levels heard by the human ear at moderate sound levels.

DECIDUOUS: Pertaining to plants that shed all their leaves every year in a certain season.

DECIVIEW OR dV: A visual index appropriate for characterizing visibility through uniform hazes, designed to be linear with respect to perceived visual changes over its entire range (from pristine to polluted conditions) in a way that is analogous to the decibel scale for sound. The deciview haze index is calculated based on the logarithmic distribution of the extinction coefficient, where a 10.0 deciview change is about a 10 percent change in extinction coefficient; a small but perceptible scenic change under many circumstances (“just noticeable change”).

DESIGNATED ROADS AND TRAILS: Specific roads and trails where some type of motorized vehicle use is allowed either seasonally or yearlong.

DESIGNATED SITE OR AREA: Cultural resource sites or areas that meet the criteria for allocation for designation for scientific use, conservation use, traditional use (socio-cultural use), public use, or experimental use.

DESIGN VALUE: A statistic that describes the air quality status of a given location relative to the level of the National Ambient Air Quality Standards (NAAQS). Design values are defined to be consistent with the individual NAAQS in terms of their averaging times and their statistical formats.

DEVELOPMENT WELL: A well drilled in proven territory (usually within 1 mile of an existing well).

DISCHARGE (WATER): The rate of flow or volume of water flowing in a stream at a given place or within a given period.

DISPERSED OR EXTENSIVE RECREATION: Recreation activities of an unstructured type that are not confined to specific locations such as recreation sites. Example of these activities may be hunting, fishing, off-road vehicle use, hiking, and sightseeing.

DISPOSAL WELL: A well into which produced water from other wells is injected into an underground formation for disposal.

DISRUPTIVE ACTIVITIES: Those uses and activities that are likely to alter the behavior of, displace, or cause excessive stress to wildlife populations occurring at a specific location or time. In this context, disruptive activities refer to those actions that alter behavior or cause the displacement of wildlife such that reproductive success is negatively affected or the physiological ability to cope with environmental stress is compromised. This term does not apply to the physical disturbance of the land surface, vegetation, or features. Examples of disruptive activities may include fence construction, noise, vehicle traffic, or other human presence regardless of the activity. The term is used in conjunction with protecting wildlife during crucial life stages (for example, breeding, nesting, birthing, and other activities) although it could apply to any resource value. This definition is not intended to prohibit all activities or authorized uses. For example, emergency activities (fire suppression, search and rescue, and other activities) or rangeland monitoring, routine maintenance associated with an

approved authorization, dispersed recreational activities (hunting, hiking, and other activities), and livestock grazing are not considered disruptive activities.

DISTRIBUTION LINE: An electric power line operating at a voltage of less than 69 kilovolts.

DISTURBANCE: Events that alter the structure, composition, or function of terrestrial or aquatic habitats. Natural disturbances include drought, floods, wind, fires, wildlife grazing, and insects and pathogens. Human-caused disturbances include actions such as timber harvest, fire, livestock grazing, road construction, and the introduction of exotic species.

DIVERSITY: The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

DOMINANT (FORESTRY): A tree with a crown that extends above the general level of the main canopy.

DRAINAGE (GEOMORPHIC): A collective term for all the waterbodies by which a region is drained; or, all the water features shown on a map.

DRAINAGE (OIL AND GAS): The uncompensated loss of hydrocarbons from federal, tribal or Native-American-allotted mineral lands from wells on adjacent non-jurisdictional lands or jurisdictional lands with lower participation, allocation, royalty rate, or distribution of funds, resulting in revenue losses to the federal or American Indian lessors.

DRAWDOWN, GROUNDWATER: A lowering of the groundwater surface caused by pumping, measured as the difference between the original groundwater level and the level after a period of pumping.

DRILL DIRECTIONALLY: The technique of drilling at an angle from a location at the surface to a different subsurface location at a specific target depth. The degree of angle that a well can be drilled is limited, which is why this technique is not employed for shallow coal seams.

DRILL RIG: The mast, drawworks, and attendant surface equipment of a drilling or workover unit.

DRILL STEM TEST: The use of a drill-stem-testing tool to test a formation's potential productivity. The tool is lowered to the formation and is packed off from the above formations. The tool is then operated to sample the formation and the results recorded. Also called a formation test.

DROP STRUCTURE: An in-stream structure of various materials designed to reduce the energy and force of stream flow.

DROUGHT: Definition includes the following categories:

- Agricultural drought is a climatic excursion involving a shortage of precipitation sufficient to adversely affect crop production or range production.
- Hydrologic drought is a period of below average water content in streams, reservoirs, groundwater aquifers, lakes, and soils.

DRY HOLE: Any well incapable of producing oil or gas in commercial quantities. A dry hole may produce water, gas or even oil, but not enough to justify production.

- E -

EARLY DETECTION RAPID RESPONSE: A process to increase the likelihood that localized invasive populations will be found, contained, and eradicated before they become widely established. EDRR can slow range expansion, and avoid the need for costly long-term control efforts. Effective EDRR depends upon the timely ability to answer critical questions such as:

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1. What is the species of concern and has it been authoritatively identified?
2. Where is it located and likely to spread?
3. What harm may the species cause?
4. What actions (if any) should be taken?
5. Who has the needed authorities and resources?
6. How will efforts be funded?

Successful Early Detection and Rapid Response Programs include:

1. potential threats are being identified in time to allow risk-mitigation measures to be taken;
2. new invasive species are being detected in time to allow efficient and environmentally sound decisions to be made;
3. responses to invasions are effective and environmentally sound and prevent the spread and permanent establishment of invasive species;
4. adequate and timely information is being provided to decision-makers, the public, and to trading partners concerned about the status of invasive species within an area; and
5. lessons learned from past efforts are being used to guide current and future efforts. (University of Georgia, USFS, and APHIS 2010).

EASEMENT: A right afforded a person or agency to make limited use of another's real property for access or other purposes.

ECOLOGICAL CONDITION: The present state of vegetation of a site in relation to the potential natural community for the site. Ecological status is use independent. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural community. Four ecological status classes correspond to 0 to 25, 26 to 50, 51 to 75, or 76 to 100 percent similarity to the potential natural community and are generally called early seral, mid-seral, late seral, and potential natural community, respectively.

ECOLOGICAL SITE: A kind of land with a specific potential natural community and specific physical site characteristics, differing from other kinds of land in its ability to produce vegetation and to respond to management.

ECOLOGICAL STATUS: The present status of vegetation of a range site in relation to the climax or natural potential plant community for the site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax plant community for the site.

ECOSYSTEM: Includes all the organisms of an area, their environment, and the linkages or interactions among all of them; all parts of an ecosystem are interrelated. The fundamental unit in ecology, containing both organisms and abiotic environments, each influencing the properties of the other and both necessary for the maintenance of life.

ELECTRICAL CONDUCTIVITY (EC): A measure of the salt content of water.

EMERGENCY STABILIZATION: Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resource, to minimize threats to life or property resulting from the effects of a fire, or to repair, replace, or construct physical improvements necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within 1 year following containment of a wildfire.

EMERGENT AQUATIC VEGETATION: An aquatic plant having part of its vegetative parts above water.

EMISSION: Air pollution discharge into the atmosphere, usually specified by mass per unit time.

ENDANGERED SPECIES: Those species of plants or animals classified by the Secretary of the Interior or the Secretary of Commerce as endangered pursuant to Section 4 of the ESA of 1973, as amended. See also **threatened** and **endangered species**.

ENHANCED RECOVERY: The use of artificial means to increase the amount of hydrocarbons that can be recovered from a reservoir. A reservoir depleted by normal extraction practices usually can be restored to production by secondary or tertiary methods of enhanced recovery.

ENTRY: An application to acquire title to public lands.

ENVIRONMENTAL ASSESSMENT (EA): A concise public document that analyzes the environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of significance of the impacts.

ENVIRONMENTAL IMPACT STATEMENT (EIS): A detailed written statement required by NEPA when an agency proposes a major federal action significantly affecting the quality of the human environment.

EPHEMERAL STREAM: A stream that flows only after a storm or during snowmelt, and whose channel is, at all times, above the water table.

EROSION: The wearing away of the land surface by running water, wind, ice, or other geological agents.

EUTROPHICATION: A process whereby waterbodies, such as lakes, estuaries, or slow-moving streams, receive excess nutrients that stimulate excessive plant growth (algae, periphyton attached algae, and nuisance plant weeds). This enhanced plant growth, often called an algal bloom, reduces dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die. Nutrients can come from many sources, such as fertilizers applied to agricultural fields, golf courses, and suburban lawns; deposition of nitrogen from the atmosphere; erosion of soil containing nutrients; and sewage treatment plant discharges. Water with a low concentration of dissolved oxygen is called hypoxic (USGS 2010b).

EXCEEDANCE: With respect to a national ambient air quality standard means one occurrence of a measured or modeled concentration that exceeds the specified concentration level of such standard for the averaging period (1-hr, 3-hr, 8-hr, 24-hr, or annual) specified by the standard.

EXCEPTIONAL EVENT: An event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance determined by the Administrator of the U.S. Environmental Protection Agency in accordance with 40 CFR 50.14 to be an exceptional event.

EXCEPTION (OIL AND GAS): A one-time exemption to a lease stipulation. Exceptions are determined on a case-by-case basis.

EXCLUSION AREAS: Areas with sensitive resource values where ROWs would be prohibited.

EXPLORATION: Building a two-track road to drill test wells for CBNG. See also **development**.

EXTENSIVE RECREATION MANAGEMENT AREA (ERMA): Areas where significant recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the BLM's stewardship responsibilities are adequate in these areas.

EXTIRPATION: To destroy or eliminate completely; wipe out.

- F -

FAN: An accumulation of debris brought down by a stream descending through a steep ravine and debouching in the plain beneath, where the detrital material spreads out in the shape of a fan, forming a section of a very low cone.

FAULT: A fracture surface in rocks along which movement of rock on one side has occurred relative to rock on the other side.

FEDERAL REGISTER: A daily publication that reports Presidential and federal agency documents.

FIELD: A production unit consisting of a collection of oil and gas pools that when projected to the surface form an approximately contiguous area that can be circumscribed.

FIRE MANAGEMENT PLAN: A strategic plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan; the plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

FIRE MANAGEMENT UNIT (FMU): A land management area definable by objectives, management constraints, topographic features, access, marginal values to be protected, political boundaries, historic fire ignitions, fuel types, major fire regime groups, etc., that set it apart from the characteristics of an adjacent FMU. FMUs may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives.

FIRE PREPAREDNESS: Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

FIRE SUPPRESSION ACTIVITY DAMAGE: Damage to resources, lands, and facilities resulting from wildfire suppression actions, in contrast to damages resulting from a wildfire.

FIRE SUPPRESSION ACTIVITY DAMAGE REPAIR: Damage to resources, lands, and facilities resulting from wildfire suppression actions, in contrast to damage resulting from a wildfire.

FIRE REGIME/CONDITION CLASS (FR/CC): An interagency, standardized tool for determining the degree of departure from reference condition vegetation, fuels, and disturbance regimes. Assessing FRCC can help guide management objectives and set priorities for treatments.

FIRE REGIMES: Periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and a real extent.

FISHERY: Habitat that supports the propagation and maintenance of fish.

FLOODPLAIN: The lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including that area subject to a 1 percent or greater chance of flooding in any given year. The 1-percent annual chance flood is also referred to as the 100-year flood.

FLOW LINE: A small diameter pipeline through which fluids move on lease before being sold.

FLUVIAL: Pertaining to streams or produced by stream action.

FORAGE: Forms of vegetation available for animal consumption.

FORB: A broad-leaved herb that is not grass or grass like.

FOREST: An ecosystem characterized by a more or less dense and extensive tree cover, often consisting of stands varying in characteristics (such as species composition, structure, age class, and associated processes) and commonly including meadows, streams, fish, and wildlife.

FOREST HEALTH: The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance.

FOREST HEALTH TREATMENTS: Treatments that restore forest ecosystems to a condition that sustains their complexity while providing for human needs.

FORESTLAND: Land that is now, or has the potential of being, at least 10 percent stocked by forest trees, based on crown closure, or 16.7 percent stocked, based on tree stocking.

FORMATION (GEOLOGIC): A rock body distinguishable from other rock bodies and useful for mapping or description. Formations may be combined into groups or subdivided into members.

FOSSIL: Mineralized or petrified form from a past geologic age, especially from previously living things.

FRAC FLOWBACK: During the drilling process, fluid or product returns along fractures in the rock to the point where it is difficult to control; for example, flowback from a point high in the borehole or at the ground surface away from the boring.

FRAGILE SOIL: A soil that is especially vulnerable to erosion or deterioration due to its physical characteristics or location. Disturbance to the surface or the vegetative cover can initiate a rapid cycle of loss and destruction of soil material, structure, and ability to sustain a biotic community.

FRAGMENTATION: The splitting or isolating of patches of similar habitat. Habitat can be fragmented by natural events or development activities.

FREE-FLOWING RIVER: Existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.

FUEL LOADING: The weight of fuels in a given area, usually expressed in tons per acre, pounds per acre, or kilograms per square meter.

FUGITIVE DUST: Airborne particles emitted from any source other than through a controllable stack or vent.

FUNCTIONAL HABITAT: The combination of requirements (i.e., food, water, cover, and space) juxtaposed in a manner necessary to provide sustainable populations of fish and wildlife species. In addition, anthropogenic activities within this habitat must be such that fish or wildlife can subsist without reducing sustainability of the species. Habitat functionality would vary by wildlife species and location.

- G -

GALLINACEOUS: Birds that nest on the ground, including turkeys, grouse, pheasants, and chickens.

GEOGRAPHIC INFORMATION SYSTEM (GIS): A computer system capable of storing, analyzing, and displaying data and describing places on the earth's surface.

GEOLOGIC PROVINCE: A USGS-defined area having characteristic dimensions of perhaps hundreds to thousands of kilometers encompassing a natural geologic entity (for example, sedimentary basin, thrust belt, delta) or some combination of contiguous geologic entities.

GEOMORPHIC: Pertaining to the form of the earth or its surface features.

GLOSSARY

GEOPHYSICAL EXPLORATION: The use of geophysical instruments and methods to determine subsurface conditions by analyzing such properties as specific gravity, electrical conductivity, or magnetic susceptibility.

GOAL: A broad statement of a desired outcome. Goals are usually not quantifiable and may not have established periods for achievement.

GRAZING RELINQUISHMENT: The voluntary and permanent surrender by an existing permittee or lessee, (with concurrence of any base property lienholder or lienholders)), of their priority (preference) to use a livestock forage allocation on public land as well as their permission to use this forage. Relinquishments do not require the consent or approval by the BLM. The BLM's receipt of a relinquishment is not a decision to close areas to livestock grazing.

GRAZING RETIREMENT: Ending livestock grazing on a specific area of land.

GRAZING SYSTEM: The manipulation of livestock grazing to accomplish a desired result.

GREATER SAGE-GROUSE HABITAT: A specific environment or set of environmental conditions suitable for occupancy by greater sage-grouse often typified by the presence of sagebrush. Sage-grouse habitat may be further defined by the season of use (i.e., winter, breeding, and brood rearing), which each has its own set of different environmental conditions. Each planning area may further define seasonal habitat characteristics based on local ecological conditions.

- **Winter:** Winter concentration areas are selected by sage-grouse where sagebrush is 10 to 14 inches above the snow, with a canopy ranging from 10 to 30 percent. Wintering areas may also be on flat to generally southwest-facing slopes or in areas where sagebrush height may be less than 10 inches (25 centimeters) but the snow is routinely blown clear by wind. In the most severe winter weather conditions, sage-grouse will often be restricted to tall stands of sagebrush usually located on deeper soils in or near drainages.
- **Nesting:** The most suitable nesting habitat includes a mosaic of sagebrush with horizontal and vertical structural diversity. A healthy understory of native grasses and forbs provides cover for concealment of the nest and hen from predators, herbaceous forage for pre-laying and nesting hens, and insects as prey for chicks and hens. Preferred nesting cover may vary dependent upon local potential habitat conditions.
- **Brood rearing:** Early brood-rearing habitat must provide adequate cover (sagebrush canopy cover of 10 to 25 percent preferable) adjacent to areas rich in forbs and insects to assure chick survival during this period. Typically, mosaics of upland sagebrush and other habitats (e.g., wet meadows or riparian areas) that together provide abundant insects and forbs for hens and chicks. All sage-grouse gradually move from sagebrush uplands to more mesic areas during the late brood-rearing period (3 weeks post hatch) in response to summer desiccation of herbaceous vegetation. These areas provide an abundance of forbs and insects for both hens and chicks. Brood-rearing habitats can include sagebrush habitats as well as riparian areas, wet meadows, and alfalfa or other agriculture fields.

GROUND COVER: Vegetation, mulch, litter, or rocks.

GROUNDWATER: Subsurface water that is in the zone of saturation. The top surface of the groundwater is the "water table." Source of water for wells, seepage, and springs.

GUIDELINES: Actions or management practices that may be used to achieve desired outcomes, sometimes expressed as BMPs. Guidelines may be identified during the land use planning process, but they are not considered a land-use-plan decision unless the plan specifies that they are mandatory.

GULLYING: The erosion process in which water accumulates in narrow channels and, over short periods, removes the soil from the narrow area to considerable depths, ranging from 2 feet to as much as 80 to 100 feet deep.

- H -

HABITAT: In wildlife management, the major elements of habitat are considered to be food, water, cover, and living space. The definition includes the following two usages:

- a species-specific environment or environmental conditions suitable for occupancy by that species, or
- a particular land cover type that provides an environment or environmental conditions suitable for occupancy by many species.

HABITAT CONNECTIVITY OR CORRIDORS: Landscape elements that connect similar patches of habitat in sufficient quantity and arrangement to allow for the movement of wildlife. These linkage zones are where species migrate and intermingle to ensure genetic interchange and, consequently, long-term survival.

HABITAT FUNCTIONALITY: see **functional habitat**

HABITAT TYPE: An aggregation of units of land capable of producing similar plant communities at climax.

HARVESTING (FORESTRY): The felling, skidding, on-site processing, and loading of trees or logs onto trucks.

HAZARDOUS WASTE:

- a) Any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act.
- b) Any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act.
- c) Any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress).
- d) Any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act.
- e) Any hazardous air pollutant listed under section 112 of the Clean Air Act.
- f) Any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act (15 U.S.C. 2601 et seq.).

The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a) through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

HERBACEOUS: Pertaining to or characteristic of an herb (fleshy-stem plant) as distinguished from the woody tissue of shrubs and trees.

HISTORIC: Period wherein nonnative cultural activities took place, based primarily upon European roots, having no origin in the traditional American Indian cultures.

HISTORIC PROPERTY OR HISTORIC RESOURCE: “Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes, for purposes of these regulations, artifacts, records, and remains that are related to and located within such properties. The term ‘eligible for inclusion in the National Register’ includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria” (36 CFR 900.2(e)).

HISTORIC RANGE OF VARIABILITY: An estimated range of conditions under which biological resources have evolved and within which they appear to be resilient to natural disturbances such as fire, wind, insects, and disease.

HOME RANGE: The area in which an animal travels in the scope of natural activities.

GLOSSARY

HORIZON (SOIL): A layer of soil or soil material roughly parallel to the land surface and differing from adjoining genetically related layers in physical, chemical, and biological properties or characteristics, such as color, structure, and texture.

HYDRIC SOILS: A soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

HYDROGEN SULFIDE OR H₂S: A colorless, highly flammable, and very toxic gas that smells like rotten eggs at low concentrations. At higher concentrations, the sense of smell is lost, therefore becoming impossible to perceive dangerous concentrations.

HYDROLOGIC CONDITION: The current state of the processes controlling the yield, timing, and quality of water in a watershed. Each physical and biologic process that regulates or influences streamflow and groundwater character has a range of variability associated with the rate or magnitude of energy and mass exchange. At any point in time, each of these processes can be defined by their current rate or magnitude relative to the range of variability associated with each process. Integration of all processes at one time represents hydrologic condition.

HYDROLOGIC UNIT: A level of a hierarchical system to describe geographic areas. Hydrologic units are used for the collection and organization of hydrologic data.

- I -

IGNEOUS ROCK: Rock, such as granite and basalt, that solidified from a molten or partially molten state.

IMPACTS (OR EFFECTS): Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable or cumulative.

IMPLEMENTATION DECISIONS: Decisions that take action to implement land-use-plan decisions. They are generally appealable to the Interior Board of Land Appeals.

IMPLEMENTATION PLAN: A site-specific plan written to implement decisions made in a land use plan. An implementation plan usually selects and applies BMPs to meet land use plan objectives. Implementation plans are synonymous with “activity” plans. Examples of implementation plans include interdisciplinary management plans, habitat management plans, and AMPs.

INDIRECT EFFECTS: Secondary effects that occur in locations other than the initial action or later in time.

INFILTRATION: The flow of a fluid into a solid substance through pores or small openings, specifically, the movement of water into soil or porous rock.

INITIAL (FIRE) ATTACK: An aggressive fire suppression action consistent with firefighter and public safety and values to be protected.

INJECTION WELL: A well-used to inject fluids into an underground formation to increase reservoir pressure.

IN-PLACE: The total volume of oil or gas thought to exist (both discovered and yet-to-be discovered) without regard to the ability to either access or produce it. Although the in-place resource is primarily a fixed, unchanging volume, the current understanding of that volume is continually changing as technology improves.

IN SITU: In the original place.

INTERDISCIPLINARY TEAM: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions. The number and disciplines of the members preparing the plan vary with circumstances. A member may represent one or more discipline or Bureau program interest.

INTERIOR BOARD OF LAND APPEALS: The USDI, Office of Hearings and Appeals Board that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because the Interior Board of Land Appeals acts for and on behalf of the Secretary of the Interior, its decisions usually represent the Department's final decision but are subject to the courts.

INTERMITTENT STREAM: A stream that flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas. For management purposes, the presence of obligate wetland species or hydric soils may be used to validate the status of streams as intermittent rather than ephemeral.

INVASIVE SPECIES: Organisms that have been introduced into an environment in which they did not evolve. Executive Order 13112 focuses on organisms likely to harm human health or cause economic or environmental harm.

INVERSION: The state of the atmosphere in which a layer of cool air is trapped near the earth's surface by an overlying layer of warm air so that the lower layer cannot rise. Serious air pollution problems may result from air pollutants being emitted into the limited mixing depth below the inversion.

- J -

JURISDICTION: The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership.

- L -

LAND AND WATER CONSERVATION FUNDS: Federal revenues generated by a tax on federal offshore oil and gas development through the Land and Water Conservation Fund Act; used to acquire highly desirable lands for the United States by the various governmental agencies.

LAND CLASSIFICATION: A process for determining the suitability of public lands for certain types of disposal or lease under the public land laws or for retention under multiple use management.

LAND USE ALLOCATION: The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions.

LAND USE PLAN: A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process, regardless of the scale at which the decisions were developed.

LEASABLE MINERALS: Federal minerals subject to lease under the Mineral Leasing Act of 1920, as amended, and supplemented. Includes minerals, such as oil, gas, coal, geothermal, tar sands, oil shale, potassium, phosphate, sodium, and asphaltic materials.

LEASE:

- A legal document that conveys to an operator the right to drill for oil and gas.
- The tract of land, on which a lease has been obtained, where producing wells and production equipment are located.

GLOSSARY

LEASE NOTICE: Provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items the lessee should consider when planning operations, but does not impose new or additional restrictions. Lease notices attached to leases should not be confused with notices to lessees (NTLs).

LEASE STIPULATION (OIL AND GAS): Conditions of lease issuance that provide protection for other resource values or land uses by establishing authority for substantial delay or site changes or the denial of operations within the terms of the lease contract. The AO has the authority to relocate, control timing, and impose other mitigation measures under Section 6 of the standard lease form. Lease stipulations clarify the Bureau's intent to protect known resources or resource values.

LEK: A traditional breeding area for sage-grouse and sharp-tailed grouse in which males assemble to establish dominance, display, and breed. Also called dancing grounds or strutting grounds.

Confirmed sage-grouse lek:

- a minimum of 2 years with 2 or more males lekking on site (preferred), or
- 1 year with two or more males lekking on site, followed with evidence of lekking (vegetation trampling, feathers, and droppings) during the subsequent year.

One of three subcategories will be assigned to a confirmed lek and are described below.

- Active: default assignment unless criteria are met for "Inactive" or "Extirpated"
- Inactive: 10 years with no sign of lek activity and supported by surveys conducted during 3 or more years over the last 10 years.
- Extirpated: habitat changes have caused birds to abandon permanently a lek (e.g., plowing, urban development, overhead power lines).

Provisionally confirmed sage-grouse lek: recent evidence of lekking, with or without observed sage-grouse.
Unconfirmed sage-grouse lek: single count with no subsequent survey or a reported lek without supporting survey data.

LESSEE: A person or entity holding record title in a lease issued by the United States (see 43 CFR 3160.0-5).

LIGNITE: A brownish-black coal that is intermediate between peat and subbituminous coal.

LITHIC SCATTER: The waste material, chips, and flakes resulting from stone tool manufacture.

LITTER: The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

LITTORAL ZONE: Shallow shoreline area.

LOAMY: Soil that is intermediate in texture and properties between sandy and clayey soils. Textural classes are sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, sandy clay loam, and clay loam with clay content between 18 and 35 percent.

LOCALITY: The area where paleontologic material is discovered.

LOCATABLE MINERALS: Minerals or materials subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale.

LOW-VOLTAGE POWER LINES: Power lines 69 kilovolt (kV) or below. Low-voltage power lines can be buried; however, most buried power lines authorized by ROWs in the planning area have been 0.48 to 14.4 kV.

- M -

MANAGEMENT DECISION: A decision made by the BLM to manage public lands. Management decisions include both land use-plan decisions and implementation decisions.

MANAGEMENT FRAMEWORK PLAN: Planning decision document prepared before the effective date of the regulations implementing the land-use-planning provisions of FLPMA, which establishes, for a given area of land, land-use allocations, coordination guidelines for multiple use, and objectives to be achieved for each class of land use or protection.

MANAGEMENT OPPORTUNITIES: A component of the analysis of the management situation; actions or management directions that could be taken to resolve issues or management concerns.

MANAGEMENT RESPONSE: Any specific action suitable to meet fire management unit objectives. Typically, the management response ranges across a spectrum of tactical options (from monitoring to intensive management actions). The management response is developed by using fire management unit strategies and objectives identified in the fire management plan.

MESIC AREA: A habitat having a moderate amount of moisture available for the support of plant life.

MINERAL: Any solid or fluid inorganic substance that can be extracted from the earth for profit.

MINERAL ESTATE: The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.

MINERAL MATERIALS: Widespread deposits of common clay, sand, gravel, or stone that are not subject to disposal under the 1872 Mining Law, as amended.

MINERAL WITHDRAWAL: A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.

MINIMIZE: To reduce the adverse impact of an operation to the lowest practical level.

MINIMIZATION MITIGATION: Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (40 CFR 1508.20 (b))

MITIGATION MEASURES: Methods or procedures developed for the purpose of reducing or lessening the impacts of an action. Reducing impacts should include all aspects of the mitigation hierarchy (avoid, minimize, restore, and offset) and appropriate measure may include on- and off-site mitigation. During the environmental review and decision-making process, appropriate mitigation measures will be selected as part of the final decision. These mitigation measures then become a mandatory part of the approved action or permit.

MODIFICATION: A change in a plan of operations (PO) that requires some level of review by the BLM because it exceeds what was described in the approved PO.

MODIFICATION (OIL AND GAS): A change to the provision of a lease stipulation, either temporarily or for the term of the lease.

MONITORING: Specific studies that evaluate the effectiveness of actions taken toward achieving management objectives.

MONITORING PLAN: The process of tracking the implementation of land-use-plan decisions.

MORPHOLOGY (BIOLOGY): A branch of biology that deals with the form and structure of animals or plants.

GLOSSARY

MORPHOLOGY (GENERAL): A study of structure or form.

MULTIPLE USE: The management of the public lands and their various resource values:

- so that they are utilized in the combination that will best meet the present and future needs of the American people;
- making the most judicious use of the lands for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some lands for less than all of the resources;
- a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific, and historical values; and
- harmonious and coordinated management of the various resources without permanent impairment of the productivity of the lands and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or greatest unit output.

- N -

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): The allowable concentrations of air pollutants in the air specified by the federal government. The air quality standards are divided into primary standards (based on air quality criteria and allowing an adequate margin of safety requisite to protect the public health) and secondary standards (based on air quality criteria and allowing an adequate margin of safety to protect the public welfare from any unknown or expected adverse effects of air pollutants).

NATIONAL LANDSCAPE CONSERVATION SYSTEM (NLCS): A system of Congressional, Presidential, or other designated areas managed by the BLM, the components of which include national monuments, national conservation areas, wilderness areas, wilderness study areas (WSAs), wild and scenic rivers, national historic trails, national scenic trails, the California Desert Conservation Area, and the Headwaters Forest Reserve.

NATIONAL REGISTER OF HISTORIC PLACES (NRHP): A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archeology, and culture, established by NHPA of 1966 and maintained by the Secretary of the Interior.

NATIONAL TRAIL MANAGEMENT CORRIDOR: Allocation established through the land use planning process, pursuant to Section 202 of Federal Land Policy and Management Act and Section 7(a)(2) of the National Trails Systems Act (“rights-of-way”) for a public land area of sufficient width within which to encompass National Trail resources, qualities, values, and associated settings and the primary use or uses that are present or to be restored.

NATIONAL WILD AND SCENIC RIVERS SYSTEM (NWSRS): A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams:

- recreation – rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past,
- scenic – rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and
- wild – rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted.

NATURAL GAS: Any gas of natural origin that consists primarily of hydrocarbon molecules producible from a borehole.

NATURAL GAS LIQUIDS: Natural gas liquids are hydrocarbons found in natural gas that are liquefied at the surface in field facilities or in gas processing plants. Natural gas liquids are commonly reported separately from crude oil.

NEOTROPICAL MIGRATORY BIRDS: Birds that travel to Central America, South America, the Caribbean, and Mexico during the fall to spend the winter and then return to the United States and Canada during the spring to breed. These birds include almost half of the bird species that breed in the United States and Canada.

NET CONSERVATION GAIN: The actual benefit or gain above baseline conditions.

NO SURFACE OCCUPANCY (NSO): Use or occupancy of the land surface is prohibited to protect special values or uses or identified resource values.

NOISE: Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

NONCONVENTIONAL (UNCONVENTIONAL): A nonconventional gas is generally thought of as gas that is created in formations without the permeability necessary to allow significant migration. It is generally described as those gas accumulations that are hard to discover, characterize, and commercially produce by common exploration and production technologies. It may include CBNG, tight sand, tight carbonates, shale, or deep gas.

NONPRODUCING RESERVES: Those reserves awaiting well work-overs, the drilling of extensions or additional development wells, installation of production or pipeline facilities, and depletion of other zones or reservoirs before recompletion in reservoirs not currently open to production.

NON-TRANSIENT NON-COMMUNITY SYSTEM: A public water system that does not serve a community but provides water regularly to a minimum of 25 of the same people for at least six months of the year.

NORTHERN CHEYENNE RESERVATION: The Northern Cheyenne Reservation as established by Executive Orders of November 26, 1884 and March 19, 1900.

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OBLIGATE WETLAND SPECIES: Plant species that occur almost always (estimated probability greater than 99 percent) under natural conditions.

OFF-ROAD VEHICLE: Off-road vehicle means any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding:

- any non-amphibious registered motorboat;
- any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes;
- any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved;
- vehicles in official use; and
- any combat or combat support vehicle when used in times of national defense emergencies.

OLIGOTROPHIC: Nutrient poor and oxygen rich; describes bodies of water such as lakes that contain relatively little plant life or nutrients but are rich in dissolved oxygen.

OPEN AREAS AND TRAILS: Designated areas and trails where off-road vehicles may be operated, subject to operating regulations and vehicle standards or an area where all types of vehicle use is permitted at all times,

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subject to standards.

OUTCOME FOCUSED MANAGEMENT: The special recreation management areas (SRMAs)/recreation management zones must have measurable outcome-focused objectives. Supporting management actions and allowable use decisions are required to:

- sustain or enhance recreation objectives,
- protect the desired recreation setting characteristics, and
- constrain uses, including non-compatible recreation activities that are detrimental to meeting recreation or other critical resource objectives (e.g., cultural or threatened and endangered species).

The SRMA/recreation management zone objectives must define the specific recreation opportunities (i.e., activities, experiences, and benefits derived from those experiences) that become the focus of recreation and visitor services management.

OVERSTOCKED: The situation in which trees are so closely spaced that they compete for resources and do not reach full growth potential.

OVERSTORY: That portion of the trees, in a forest of more than one story, forming the upper or uppermost canopy layer.

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PALEONTOLOGICAL RESOURCES (FOSSILS): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PALEONTOLOGY: A science dealing with the life forms of past geological periods as known from fossil remains.

PARENT MATERIAL: The unconsolidated and chemically-weathered mineral or organic matter from which the horizons of soils develop by natural processes.

PARTICULATE MATTER: A particle of soil or liquid matter (e.g., soot, dust, aerosols, fumes, and mist).

PARTS PER BILLION (PPB): A unit of measurement for volumetric concentration that is typically used for gaseous air pollutants. One ppb is equal to 1×10^{-9} and equivalent to 0.001 parts per million (ppm).

PARTS PER MILLION (PPM): A unit of measurement for volumetric concentration that is typically used for gaseous air pollutants. One ppm is equal to 1×10^{-6} and equivalent to 1,000 parts per billion (ppb).

PATCHY MOSAIC TYPE: A diversity of habitat patches that allow various species to complete life cycle requirements across a range of habitat types.

PATENT: The instrument by which the federal government conveys title to the public lands.

PERENNIAL STREAM: A stream that flows continuously. Perennial streams are generally associated with a water table in the locations through which they flow.

PERMEABILITY: The ease with which gases, liquids, or plant roots pass through a layer of soil. Accepted as a measure of this property is the rate at which soil transmits water while saturated, and may imply how well water passes through the least permeable soil layer.

PERMITTED USE: The forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease. Expressed in AUMs.

PERMITTEE: Holder of a valid permit that authorizes certain uses of the public lands (e.g., for grazing).

PETROGLYPH: A figure, design, or indentation carved, abraded, or pecked into a rock.

PETROLEUM: A collective term for oil, gas, natural gas liquids, and tar.

pH: A measure of acidity or alkalinity. A solution with a pH of 7 is neutral, pH greater than 7 (to 14) is alkaline, and a pH less than 7 (to 0) is acidic.

PICTOGRAPH: A figure or design painted onto a rock.

PLAN: A document that contains a set of comprehensive, long-range decisions concerning the use and management of BLM-administered resources in a specific geographic area.

PLANNING AREA: A geographical area for which land use and resource management plans are developed and maintained.

PLANNING CRITERIA: The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions.

PLANNING DECISION (LAND USE PLAN DECISION): Establishes desired outcomes and actions needed to achieve them. Decisions are reached using the BLM planning process. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to Interior Board of Land Appeals.

PLAY: A set of known or postulated oil and gas accumulations sharing similar geologic, geographic, and temporal properties, such as source rock, migration pathway, timing, trapping mechanism, and hydrocarbon type. A play may differ from an assessment unit, and an assessment unit can include one or more plays.

POLE: A tree of a size between a sapling and mature tree.

POPULATION: Within a species, a distinct group of individuals that tend to mate only with members of the group. Generations of inbreeding cause members of a population to tend toward similar genetic characteristics.

POST-FLPMA LEASES: Oil and gas leases issued after the passage of FLPMA of 1976. Where occurring in WSAs, these leases have no valid existing rights and could not impair wilderness values.

POTENTIAL NATURAL COMMUNITY: The biotic community that would become established if all successional sequences were completed without interferences under the present environmental conditions.

POTENTIAL TO EMIT (PTE): The maximum capacity of a facility or emitting unit, within physical and operational design, to emit a pollutant. Any physical or operational limitation on the capacity of the facility or emitting unit to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, is treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable.

PRAIRIE DOG COLONY COMPLEX: A group of prairie dog colonies distributed so that individual black-footed ferrets can migrate among them commonly and frequently. This distance has been determined to be 7 kilometers (4.4 miles).

PRECAMBRIAN: Pertaining to the earliest era of geological history, extending from 4.5 billion to 540 million years ago and encompassing seven-eighths of the earth's history. Just before the end of the Precambrian, complex multicellular organisms, including animals, evolved.

PRE-COMMERCIAL THINNING: A thinning that does not yield trees of commercial value, usually

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designed to reduce stocking in order to concentrate growth on the more desirable trees.

PRE-FLPMA LEASES: Oil and gas leases issued prior to the passage of FLPMA of 1976. Where occurring in WSAs, these leases have valid existing rights that allow development even if wilderness values may be impaired.

PREHISTORIC: Refers to the period wherein American Indian cultural activities took place that were not yet influenced by contact with historic nonnative culture or cultures.

PRESCRIBED FIRE: The introduction of fire to an area under regulated conditions for specific management purposes.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD): A regulatory program under the Clean Air Act (Public Law 84-159, as amended) to limit air quality degradation in areas currently achieving the National Ambient Air Quality Standards. The PSD program established air quality classes in which differing amounts of additional air pollution are allowed above a legally defined baseline level. Small additional air pollution may be considered significant in PSD Class I areas (certain large national parks and wilderness areas in existence on August 7, 1977, and specific Tribal lands redesignated since then). PSD Class II areas allow deterioration associated with moderate, well-controlled growth (most of the country). Area classes are described below.

- Class I: an area that allows only minimal degradation above “baseline.” The Clean Air Act designated existing national parks over 6,000 acres and national wilderness areas over 5,000 acres in existence on August 7, 1977, as mandatory federal Class I Areas. These areas also have special visibility protection. In addition, four tribal governments have redesignated their lands as Class I Areas.
- Class II: an area that allows moderate degradation above “baseline.” Most of the United States (outside nonattainment areas) is Class II.
- Class III: any area that allows the maximum amount of degradation above “baseline.” Although the U.S. Congress allows air quality regulatory agencies to redesignate Class II lands to Class III, none have been designated.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT AND INCREMENT ANALYSIS: The allowable PSD increment is the change in pollutant concentration allowed in a Class I, Class II, or Class III area. PSD increment values are provided in USEPA regulations. As performed by the BLM for NEPA analysis, PSD increment analysis is a method of comparing predicted (modeled) pollutant concentrations to USEPA’s allowable PSD increment values for the purpose of public disclosure only. The BLM increment analysis is not a regulatory analysis. State air quality agencies and the USEPA perform regulatory PSD increment analysis.

PREY BASE: Populations and types of prey species available to predators.

PRIMITIVE AND UNCONFINED RECREATION: Non-motorized, non-mechanized and undeveloped types of recreational activities.

PRIMITIVE ROAD: A linear route managed for use by four-wheel drive or high-clearance vehicles. Primitive roads do not normally meet any BLM road design standards.

PRIMITIVE ROUTES: Any transportation linear feature located within a WSA or lands with wilderness characteristics designated for protection by a land use plan and not meeting the wilderness inventory road definition.

PROBABLE SALE QUANTITY (PSQ): PSQ estimates the allowable harvest levels for the various alternatives that could be maintained without decline over the long-term if the schedule of harvests and regeneration were followed. "Allowable" was changed to "probable" to reflect uncertainty in the calculations for some alternatives. PSQ is otherwise comparable to allowable sale quantity. However, PSQ does not reflect a commitment to a specific cut level. PSQ includes only scheduled or regulated yields and does not include "other wood" or volume of cull and other products that are not normally part of allowable sale quantity calculations.

PRODUCED WATER: Water produced from oil and gas wells.

PROJECT AREA: The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.

PROJECT PLAN: Detailed survey and design plan.

PROPER FUNCTIONING CONDITION (PFC): A riparian or wetland area is considered to be in proper functioning condition when adequate vegetation, landform, or large woody debris is present to:

- dissipate stream energy associated with high waterflow, thereby reducing erosion and improving water quality;
- filter sediment, capture bedload, and aid floodplain development;
- improve floodwater retention and groundwater recharge;
- develop root masses that stabilize streambanks against cutting action;
- develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; support greater biodiversity.

PROPPANT: A solid material, typically treated sand or man-made ceramic materials, designed to keep an induced hydraulic fracture open, during or following a fracturing treatment.

PROTEST: Application for review by a higher administrative level.

PROVED GROWTH RESERVED OR RESERVE GROWTH: The increases in known petroleum volume that commonly occur as oil and gas accumulations are developed and produced, synonymous with field growth.

PROVED RESERVE: The volume of oil and gas demonstrated, on the basis of geologic and engineering information, to be recoverable from known oil and gas reservoirs under present-day economic and technological conditions.

PUBLIC LAND: Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM, except lands located on the Outer Continental Shelf, and land held for the benefit of American Indians, Aleuts, and Eskimos.

PULPWOOD: Roundwood, whole-tree chips, or wood residues used for the production of wood pulp.

- R -

RANGE IMPROVEMENT: Range improvement means an authorized physical modification or treatment designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; restore, protect and improve the condition of rangeland ecosystems to benefit livestock, wild horses and burros, and fish and wildlife. The term includes, but is not limited to, structures, treatment projects, and use of mechanical devices or modifications achieved through mechanical means.

RANGELAND: Land used for grazing by livestock and big game animals on which vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.

RAPTOR: Bird of prey with sharp talons and strongly curved beaks (hawks, falcons, owls, and eagles).

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO (RFD): The prediction of the type and amount of oil and gas activity that would occur in a given area. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.

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RECLAIM: To return the landscape to a useful state (Perrow and Davy 2003).

RECLAMATION: The stabilization of the terrain, assurance of public safety, aesthetic improvement, and a return of the land to what, within the regional context, is considered to be a useful purpose.

RECLAMATION PLAN: The reclamation plan is a written document that addresses the reconstruction of disturbed ecosystems by returning the land to a stable and productive condition compatible with the RMP.

RECORD OF DECISION (ROD): A document signed by a responsible official recording a decision that was preceded by the preparing of an EIS.

RECREATION (VISITOR) EXPERIENCES: psychological outcomes realized either by recreation-tourism participants as a direct result of their on-site leisure engagements and recreation-tourism activity participation or by nonparticipating community residents as a result of their interaction with visitors and guests within their community or interaction with the BLM and other public and private recreation-tourism providers and their actions.

REGENERATION: The act of renewing tree cover by establishing young trees naturally or artificially.

RELICT: A remnant or fragment of the vegetation of an area that remains from a former period when the vegetation was more widely distributed.

RENEWABLE ENERGY: Energy that comes from natural, renewable (naturally replenished) resources (such as sunlight, wind, rain, and tides). Renewable energy projects on BLM-administered lands include wind, solar, and biomass projects and the siting of transmission facilities needed to deliver this power to the consumer. Renewable energy projects are approved via a Right-of-Way Authorization.

REQUIRED DESIGN FEATURES (RDFs): Required Design Features (RDFs) are required for certain activities in all GRSG habitat. RDFs establish the minimum specifications for certain activities to help mitigate adverse impacts. However, the applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.

RESERVE COMMON ALLOTMENT (RCA): A unit of public land that will not have term grazing permits issued. Such an allotment would only be grazed on a temporary nonrenewable basis. The use of these allotments would be to provide temporary grazing to rest other areas following wildfire, habitat treatments, or to allow for more rapid attainment of rangeland health. The allotment must be of sufficient size to be managed as a discrete unit. Allotments should be distributed throughout the planning area.

RESERVE PIT: Usually an excavated pit that may be lined with plastic or that holds drill cuttings and waste mud; term for the pit that holds the drilling mud.

RESERVES (MINERAL): Known mineral deposits that are recoverable under present conditions but are as yet undeveloped.

RESERVOIR (OIL AND GAS): A naturally occurring, underground container of oil and gas, usually formed by deformation of strata and changes in porosity.

RESIDUAL IMPACTS: Impacts that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

RESILIENCE: The capacity of a plant community or ecosystem to maintain or regain normal function and development following disturbance.

RESOURCE ADVISORY COUNCIL (RAC): A council established by the Secretary of the Interior to provide advice or recommendations to BLM management.

RESOURCE MANAGEMENT PLAN (RMP): A land use plan as prescribed by FLPMA that establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.

RESTORE: To return the landscape to the original state (Perrow and Davy 2003).

RESTORATION: The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Restoration attempts to return an ecosystem to its historic trajectory, i.e., to a state that resembles a known prior state or to another state that could be expected to develop naturally within the bounds of the historic trajectory. The restored ecosystem may not necessarily recover its former state, since contemporary constraints and conditions can cause it to develop along an altered trajectory.

REVISION: The process of completely rewriting the land use plan because of changes in the planning area affecting major portions of the plan or the entire plan.

RIGHT-OF-WAY CORRIDOR: A parcel of land that has been identified by law, Secretarial order, through a land use plan or by other management decision as being the preferred location for existing and future ROW grants and suitable to accommodate one type of ROW or one or more ROWs that are similar, identical, or compatible.

RIGHT-OF-WAY GRANT: A document authorizing a non-possessory, nonexclusive right to use federal lands for the limited purpose of construction, operation, maintenance, and termination of a pipeline, road, or power line.

RIGHT-OF-WAY (major): High-voltage transmission lines and major pipelines – 100 kv and over for transmission lines and 24” in width and over for pipelines.

RIGHT-OF-WAY (minor): Other (minor) rights-of-way and land use authorizations/permits – communication sites and towers etc.

RILL: Small, conspicuous water channel or rivulet that concentrates runoff; usually less than 6 inches deep.

RIPARIAN AREA: An area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.

RIVER DESIGNATION: The process whereby rivers are added to the NWSRS by an act of Congress or by administrative action of the Secretary of the Interior with regard to state-designated rivers under Section 2(a)(ii) of the Wild and Scenic Rivers Act (WSRA).

ROAD: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

ROADLESS: Refers to the absence of roads that have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not

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constitute a road.

ROCK ART: Petroglyphs or pictographs.

RUNOFF: The water that flows on the land surface from an area in response to rainfall or snowmelt.

- S -

SAGEBRUSH HABITAT: A land cover type with sagebrush as the dominant plant species. Sagebrush habitat provides environmental conditions for many species associated with sagebrush for all or part of their lifecycle. Examples of sagebrush-associated species include greater sage-grouse, sage sparrows, sage thrashers, and common sagebrush lizards.

SAGE-GROUSE AREAS: MFWP Core Areas contain habitat associated with:

- Montana's highest densities of sage-grouse (25 percent quartile), based on male counts; or
- sage-grouse lek complexes and associated habitat important to sage-grouse distribution (refer to Greater Sage-grouse Core Areas Designation for Montana, Version 1.0; January 13, 2009).

Wyoming Core Areas were designated by the Governor's Sage-grouse Implementation Team in 2008. The goal of the designation was to incorporate at least two-thirds of the sage-grouse population in Wyoming. A map of high-density areas based on lek data with 4-mile buffers served as a base map. Using the density map, the team avoided areas of development and included areas of lower sage-grouse lek density to include, ultimately, 83 percent of the peak males on leks into the Core Population Areas. The team intends for Core Area boundaries to change based on new information.

SAGE-GROUSE GENERAL HABITAT MANAGEMENT AREAS: Areas with or without ongoing or imminent impacts containing sage-grouse habitat outside of the priority areas. Management actions would maintain habitat for sustainable sage-grouse populations to promote movement and genetic diversity. Areas are delineated based on sage-grouse habitat.

SAGE-GROUSE PRIORITY HABITAT MANAGEMENT AREAS: Areas with limited impacts containing substantial and high quality sage-grouse habitat that supports sustainable sage-grouse populations. Management actions would emphasize the protection and enhancement of sustainable sage-grouse populations. Areas are delineated using "key," "core," and connectivity data or maps and other resource information.

SAGE-GROUSE RESTORATION HABITAT MANAGEMENT AREAS: Areas with ongoing or imminent impacts containing substantial and high-quality sage-grouse habitat that historically supported sustainable sage-grouse populations. Management actions would emphasize restoration for the purpose of establishing or restoring sustainable sage-grouse populations. Areas are delineated using key, core, and connectivity data or maps and other resource information.

SALEABLE MINERALS: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

SALINITY: A measure of the salts dissolved in water. See **alkalinity**.

SAPLING: A young tree larger than a seedling, but smaller than a pole.

SCENIC QUALITY: The relative worth of a landscape from a visual perception or a measure of the visual appeal of a tract of land.

SCENIC RIVER: A river or section of a river that is free of impoundments and with largely undeveloped shorelines that are accessible in places by roads.

SCOPING: The process of identifying the range of issues, management concerns, preliminary alternatives, and

other components of an EIS or land use planning document. It involves both internal and public viewpoints.

SEASONAL RESTRICTION: A fluid minerals leasing constraint that prohibits surface use during specified periods to protect identified resource values. The constraint does not apply to the operation and maintenance of production facilities unless analysis demonstrates that such constraints are needed and that less stringent, project-specific constraints would be insufficient.

SECTION 7 CONSULTATION: The requirement of Section 7 of the ESA that all federal agencies consult with the USFWS or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

SECTION 106 COMPLIANCE: The requirement of Section 106 of NHPA that any project funded, licensed, permitted, or assisted by the federal government be reviewed for impacts to significant historic properties and that the state historic preservation officer (SHPO) and the Advisory Council on Historic Preservation be allowed to comment on a project.

SEDIMENT: Soil, rock particles, and organic or other debris carried from one place to another by wind, water, gravity, ice, or other geologic agent.

SEDIMENT YIELD: The amount of sediment produced in a watershed (expressed in tons, acre-feet, or cubic yards of sediment per unit of drainage area per year).

SEDIMENTARY ROCK: A layered rock resulting from the consolidation of sediment, such as shale, sandstone, and limestone.

SEDIMENTATION: The process or action of depositing sediment.

SEEDLING: A young plant or tree grown from a seed.

SEGREGATION: Any act such as a withdrawal or exchange that suspends the operation of the public land laws.

SEISMIC OPERATIONS: Use of explosive or mechanical thumpers to generate shock waves that can be read by special equipment to give clues to subsurface conditions.

SENSITIVE SOILS: Soils with a high risk of degradation from surface uses. The following soils are considered sensitive to surface uses: soils poorly suited to reclamation, soils on steep slopes, highly compactible soils, and hydric soils. Criteria used to determine soil sensitivity to surface uses are continually adapted as conditions change or new information or technology becomes available.

SENSITIVE SPECIES: Species designated by a BLM State Director, usually in cooperation with the state agency responsible for managing the species and state natural heritage programs, as sensitive. They are those species that:

- could become endangered in or extirpated from a state or within a significant portion of its distribution;
- are under status review by the USFWS or National Oceanic and Atmospheric Administration Fisheries;
- are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution;
- are undergoing significant current or predicted downward trends in population or density such that federal listed, proposed, candidate, or state-listed status may become necessary;
- typically have small and widely dispersed populations;
- inhabit ecological refugia or other specialized or unique habitats; or
- are state listed but which may be better conserved through the application of BLM sensitive species status.

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SERIAL COMMUNITY: One of a series of plant communities that follow one another in time on any given area.

SERIAL STAGE: A potential plant community made up of a mix of trees and shrubs.

SHALLOW COAL SEAM: Those coal seams too shallow to drill directionally given the area's geology and spacing limitations.

SHEET EROSION: The detachment of soil material from the land surface by raindrop impact and its subsequent removal by runoff.

SHRUB: A low, woody plant, usually with several stems; may provide food or cover for wildlife.

SIGNIFICANT: An effect that is analyzed in the context of the proposed action to determine the degree or magnitude of importance of the effect, either beneficial or adverse. The degree of significance can be related to other actions with individually insignificant but cumulatively significant impacts.

SIGNIFICANT CULTURAL RESOURCE (SITE): A cultural site is considered a significant cultural site if it meets the following criteria:

- sites or areas designated or sites or areas that meet the criteria for allocation for designation for scientific use, conservation use, traditional use (socio-cultural use), public use, and experimental use (except for discharged Use, see the *Cultural Resources Appendix*);
- the boundaries of sites or districts eligible for or included on the NRHP; and
- the boundaries of TCPs, or sites or areas designated as such, or sites or areas that meet the criteria for allocation for designation for traditional use (socio-cultural use).

Activity is prohibited in cultural properties determined to be of particular importance to American Indian groups, TCPs, or sites designated for traditional use. Such properties include, but are not limited to:

- burial locations,
- pictograph and petroglyph sites,
- vision quest locations,
- plant-gathering locations, and
- areas considered sacred or used for religious purposes.

SILVICULTURE: The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

SITE: The combination of biotic, climatic, topographic, and soil conditions of an area.

SITE PREPARATION: Hand or mechanized manipulation of a site, designed to enhance the success of regeneration.

SLASH: The branches, bark, tops, cull logs, and broken or uprooted trees left on the ground after logging.

SLOPE: The degree of deviation of a surface from the horizontal.

SOCIAL SCIENCE: The study of society and of individual relationships in and to society, generally including one or more of the academic disciplines of sociology, economics, political science, geography, history, anthropology, and psychology.

SODIUM ADSORPTION RATIO: An expression of relative activity of sodium ions in exchange reactions with soil, indicating the sodium or alkali hazard to soil. It is a particularly important measure in waters used for irrigation purposes.

SOIL: The collection of natural bodies occupying parts of the earth's surface that is capable of supporting plant growth and that has properties resulting from the integrated effects of climate and living organisms acting upon parent material, as conditioned by topography over periods of time.

SOIL PRODUCTIVITY: The capacity of a soil to produce a plant or sequence of plants under a system of management.

SOIL SURVEY: The systematic examination, description, classification, and mapping of soils in an area, usually a county. Soil surveys are classified according to the level of detail of field examination. Order I is the most detailed, then Order II, on to Order V, which is the least detailed. Most BLM soil surveys are Order II or III.

SOIL TEXTURE: The relative proportions of the three size groups of soil grains (sand, silt, and clay) in a mass of soil.

SOLID WASTE: Any solid, semi-solid, liquid, or contained gaseous material that is intended for disposal.

SOLITUDE: (1) the state of being alone or remote from others; isolation; (2) a lonely or secluded place.

SOUND: A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

SOURCE POPULATION AREA (SAGE-GROUSE): An identified area within a Sage-grouse Habitat – Restoration Area (in the Cedar Creek anticline portion of the planning area) that contains a small population of sage-grouse and low existing energy development. The objective is to maintain remnant populations to enable future translocations and maintain connectivity between habitat areas.

SOURCE WATER PROTECTION AREA: The area delineated by the State for a public water system or including numerous public water systems, whether the source is groundwater or surface water or both, as part of the State Source Water Assessment Program.

SPACING UNIT: The number of acres that one oil or gas well will efficiently drain. The Montana Board of Oil and Gas Conservation (MBOGC) establishes the size of spacing units for each oil and gas field.

SPECIAL RECREATION MANAGEMENT AREA (SRMA): Areas that require explicit recreation management to achieve recreation objectives and provide specific recreation opportunities.

SPECIAL STATUS SPECIES: Include the following:

- species that have been officially proposed for listing as threatened or endangered by the Secretary of the Interior,
- species officially listed as threatened or endangered by the Secretary of the Interior under the provisions of the ESA,
- species designated as candidates for listing as threatened or endangered by the USFWS or National Oceanic and Atmospheric Administration Fisheries,
- species listed by a state in a category implying but not limited to potential endangerment or extinction, and
- sensitive species as designated by a State Director.

SPECIES DIVERSITY: The number, different kinds of, and relative abundances of species present in a given

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area.

SPECIES OF SPECIAL INTEREST OR CONCERN: Plant or animal species not yet listed as endangered or threatened but that are undergoing status review by a federal or state agency. This may include plant or animal species whose populations could become extinct by any major habitat change. A species that is particularly sensitive to some external disturbance factors.

SPLIT ESTATE: Surface and minerals of a given area in different ownerships. Frequently, the surface is privately owned while the minerals are federally owned.

SPUDDING: To begin drilling, to start the hole.

STAND: A contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

STANDARD: A description of the physical and biological conditions or degree of function required for healthy, sustainable lands (e.g., land health standards).

STAND DENSITY: A quantitative measure of stocking expressed either absolutely in terms of number of trees, basal, area, volume per unit area, or relative to some standard condition.

STEEP SLOPE: Slope greater than 25 percent.

STIPULATION: A condition or requirement attached to a lease or contract, usually dealing with protection of the environment, or recovery of a mineral.

STOCKING: An indication of growing-space occupancy relative to a pre-established standard.

STRATEGIC PLAN: A plan that establishes the overall direction for the BLM. This plan is guided by the requirements of the Government Performance and Results Act of 1993 (31 U.S.C. 1101 et seq.), covers a 5-year period, and is updated every 3 years. It is consistent with FLPMA and other laws affecting the public lands.

STRATIGRAPHY: The arrangement of strata, especially as to geographic position and chronologic order of sequence.

STREAM REACH: A specified length of a stream or channel.

STRUCTURAL IMPROVEMENTS: Improvements such as fences, reservoirs, springs, pipelines, waterspreaders, wells, water troughs, land treatments, and in-stream structures. These improvements are for the livestock grazing, wildlife, recreation, watershed, and soils programs.

STRUCTURE (OF FOREST VEGETATION): The horizontal and vertical distribution of plants in a stand, including height, diameter, crown layers, and stems of trees, shrubs, herbaceous understory, snags, and coarse woody debris.

STRUCTURE (STREAM CHANNEL): Any object, usually large, in a stream channel that controls water movement.

SUBBITUMINOUS: A black coal, intermediate in rank between lignite and bituminous coal. Distinguished from lignite by higher carbon and lower moisture content.

SUBSOIL: This is roughly, the part of the solum below the organic topsoil and above the rocky parent material of the C horizon; the B horizon. When suitable, the subsoil may be salvaged to supplement the topsoil for plant establishment.

SUBSTRATE: The mineral or organic material that forms the bed of a stream; the base upon which an organism lives; the surface on which a plant or animal grows or is attached.

SULFUR DIOXIDE (SO₂): A colorless gas formed when sulfur oxidizes, often as a result of burning trace amounts of sulfur in fossil fuels.

SUPPRESSION ACTIVITY DAMAGE REPAIR: Damage to resources, lands, and facilities resulting from wildfire suppression actions, in contrast to damages resulting from a wildfire. Suppression activity damage repairs are the responsibility of the incident commander and are funded using the suppression account. This work should be completed by the incident management team prior to final demobilization of the suppression forces whenever practical. However, it may be more cost-effective and practical to delay some repairs to improve the chance of success. It is the responsibility of the agency administrator to ensure suppression activity damage repair.

SUPPRESSED (FORESTRY): A tree condition characterized by low growth rate and low vigor as a result of competition.

SURFACE-DISTURBING ACTIVITIES: The physical disturbance or removal of land surface and vegetation. Some examples of surface-disturbing activities include, but are not limited to, construction of roads, well pads, pipelines, power lines, reservoirs, facilities, recreation sites, and mining. Vegetation renovation treatments that involve soil penetration or substantial mechanical damage to plants (plowing, chiseling, chopping, and other activities) are also surface-disturbing activities. This definition is not intended to prohibit all activities or authorized uses. For example, emergency activities (fire suppression, search and rescue, and other activities) or rangeland monitoring, routine maintenance associated with an approved authorization, dispersed recreational activities (hunting, hiking, and other activities), and livestock grazing are not considered surface-disturbing activities.

SURFACE WATER IMPOUNDMENT: A human-constructed impoundment (e.g., pits, reservoirs, stock ponds) of surface water (e.g., overland flow, streamflow, spring flow) confined by a dam, dike, or other constructed barrier. This does not include impoundments of groundwater (unless the water were naturally discharged to the surface, as in a spring), water from wells, or produced water sources (e.g., water disposal pits).

SUSTAINABILITY: The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

SUSTAINABLE POPULATION: Capable of maintaining a healthy, productive, and reproducing population over a long period. Sustainability is achieved when population growth rate (i.e., lambda) is greater than or equal to 1.0.

SUSTAINED YIELD: Maintenance of an annual or regular periodic output of a renewable resource from public land consistent with the principles of multiple use.

SYNCLINES: A downward, trough-shaped configuration of folded, stratified rocks.

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TAKE: As defined by the ESA, “to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct.”

TECHNICAL/ECONOMICALLY FEASIBLE: Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the BLM’s sole responsibility to determine what actions are technically and economically feasible. The BLM will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation

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about an applicant's costs and profit." (Modified from the CEQ's 40 Most Asked Questions and BLM NEPA Handbook, Section 6.6.3)

TECHNICALLY RECOVERABLE RESOURCES: The volume of hydrocarbons recoverable using current exploration and production technology without regard to cost, which is a proportion of the estimated in-place resource.

TERMS AND CONDITIONS: Measures contained in livestock grazing permits and leases that are determined by the AO to be appropriate to achieve management and resource condition objectives for the public lands and other lands administered by the BLM, and to ensure conformance with fundamentals of rangeland health and standards and guidelines for grazing administration.

TERRACE DEPOSITS: A terrace is one of a series of level surfaces in a stream valley that flank and are relatively parallel to the stream channel. It is above the level of the stream, and represents the dissected remnants of an abandoned floodplain, streambed, or valley floor produced during a former stage of erosion or deposition.

TERRESTRIAL SPECIES: Ground-dwelling plants and animals.

THERMAL COVER: Vegetation or topography that prevents radiation heat loss, reduces wind chill during cold weather, and intercepts solar radiation during warm weather.

THINNING: A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

THREATENED SPECIES: Any plant or animal species defined under the ESA as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the Federal Register.

TIMELINESS: The lack of a time lag between impacts and the achievement of compensatory mitigation goals and objectives (BLM Manual Section 1794).

TOOLS: Something that helps to accomplish the stated goal or action for a resource or resource use or program. Tools include: timing, duration of grazing, forage utilization, grazing rotation, deferment of grazing, stubble height, bank alteration, and structural features.

TOPSOIL: The organically enhanced, biologically active, mineral, surface horizon; the A horizon.

TOTAL DISSOLVED SOLIDS (TDS): The dry weight of dissolved material, organic and inorganic, contained in water.

TOTAL MAXIMUM DAILY LOAD (TMDL): A TMDL is the total amount of a pollutant that a waterbody may receive from all sources without exceeding water quality standards. A TMDL can also be defined as a reduction in pollutant loading that results in meeting water quality standards. The TMDL process was established under Section 303(d) of the Clean Water Act. A TMDL includes both a waste load allocation, which focuses on point sources, and a load allocation, which addresses nonpoint sources.

TOTAL PETROLEUM SYSTEM (TPS): All genetically related petroleum generated by a pod or closely related pods of mature source rocks. Particular emphasis is placed on similarities of the fluids of petroleum accumulations and is therefore closely associated with the generation and migration of petroleum. The geologic elements of a TPS include:

- source-rock distribution, thickness, organic richness, maturation, petroleum generation, and migration;
- reservoir-rock type (conventional or continuous), distribution, and quality; and
- character of traps and time of formation with respect to petroleum generation and migration.

TRADITIONAL LIFEWAY VALUES: Values important for maintaining a group's traditional system of religious belief, cultural practice, or social interaction. A group's shared traditional lifeway values are abstract, nonmaterial, ascribed ideas that cannot be discovered except through discussions with members of the group. These values may or may not be closely associated with definite locations. Traditional lifeway values sometimes imbue cultural resources with significance. They can be identified through consultation and considered through public participation during planning and environmental review. The BLM does not manage people's values, beliefs, or social systems.

TRAIL: A linear route managed for human-powered, stock, or off-highway vehicle (OHV) forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

TRANSIENT NON-COMMUNITY SYSTEM: A public water system that does not serve communities and does not regularly serve a minimum of 25 of the same people for at least six months of the year.

TRANSMISSION LINE: A large diameter pipeline through which oil or gas moves off lease after being sold.

TUNDRA: Treeless arctic and alpine areas in which cover may consist of bare ground, grasses, sedges, forbs, dwarf shrubs, mosses, or lichens.

TURBIDITY: Interference of the passage of light through water resulting from insoluble particles of soil, organic material, microorganisms, and other materials.

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UNDERGROUND INJECTION CONTROL PROGRAM: A program administered by the United States Environmental Protection Agency (USEPA), primacy state, or tribe under the Safe Drinking Act to ensure that subsurface waste injection does not endanger underground sources of drinking water.

UNDERSTORY VEGETATION: Plants, usually grasses, forbs, and low shrubs, growing beneath the canopy of other plants.

UNDISCOVERED TECHNICALLY RECOVERABLE RESOURCE: A subset of the in-place resource base hypothesized to exist on the basis of geologic knowledge, data on past discoveries, or theory, and that is contained in undiscovered accumulations outside of known fields. Estimated resource quantities are producible using current recovery technology but without reference to economic viability. These resources are therefore dynamic, constantly changing to reflect increased understanding of both the in-place resource as well as the likely nature of future technology. Only accumulations greater than or equal to 1 million barrels of oil or 6 billion cubic feet of gas were included in the earlier 1995 USGS assessment.

UNGULATES: Hoofed animals, including ruminants but also horses, tapirs, elephants, rhinoceroses, and swine.

UNITIZATION: Pooling of mineral acreages proposed by a company to facilitate the efficient development of a reservoir based on geology and reservoir characteristics of a producing formation or formations.

UNNECESSARY OR UNDUE DEGRADATION: Conditions, activities, or practices that:

- are not "reasonably incident" to prospecting, mining, or processing operations as defined in Sec. 3715.0-5 of this title;
- fail to attain a stated level of protection or reclamation required by specific laws in areas such as the California Desert Conservation Area, wild and scenic rivers, BLM-administered portions of the National Wilderness System, and BLM-administered National Monuments and National Conservation Areas;

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- occur on mining claims or mill sites located after October 21, 1976 (or on unclaimed lands) and result in substantial irreparable harm to significant scientific, cultural, or environmental resource values of the public lands that cannot be effectively mitigated; or
- that fail to comply with one or more of the conditions described below.
 - The performance standards in Sec. 3809.420 (43 CFR),
 - the terms and conditions of an approved PO,
 - operations described in a complete notice, and
 - other federal and state laws related to environmental protection and protection of cultural resources.

UPLANDS: Lands at higher elevations than alluvial plains or low stream terraces; all lands outside the riparian or wetland and aquatic zones.

USABLE WATER: Those waters containing up to 10,000 ppm of total dissolved solids.

USER DAY: Any calendar day, or portion thereof, for each individual accompanied or serviced by an operator or permittee on the public lands or related waters; synonymous with passenger day or participant day.

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VALID EXISTING RIGHTS: Documented, legal rights or interests in the land that allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership, mineral rights, rights-of-way, easements, permits, and licenses. Such rights may have been reserved, acquired, leased, granted, permitted, or otherwise authorized over time.

VEGETATION COMMUNITY: An assemblage of plant populations in a common spatial arrangement.

VEGETATION MANIPULATION: Alteration of vegetation by using fire, plowing, or other means.

VEGETATION TYPE: A plant community with distinguishable characteristics described by the dominant vegetation present.

VIALE: Capable of sustaining a healthy and reproducing population over a long period.

VIEWSHED: Landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

VISUAL RESOURCES: The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

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WAIVER (OIL AND GAS): A permanent exemption to a lease stipulation.

WASTE MATERIAL: Any discarded or abandoned material that can interfere with successful reclamation, safety, and long-term stability of a site (e.g., contaminated soil or water, drilling mud, or solid waste).

WATER QUALITY: The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

WATER QUALITY RESTORATION PLANS: A comprehensive plan developed in conjunction with MDEQ, local watershed groups, and numerous agencies and entities to address and establish water quality goals, TMDLs, restoration strategies, and monitoring.

WATERSHED: A geomorphic area of land and water within the confines of a drainage divide. The total area above a given point on a stream that contributes flow at that point.

WATERSHED HEALTH: Watershed condition is determined by the physical and biological characteristics and processes that impact the function of a watershed. Watershed functionality includes hydrologic and ecologic functions (such as collection and transportation of precipitation and water storage and release) and characteristics (such as sites for plant and animal habitat and chemical reactions). Properly functioning or healthy watersheds have high biotic and soil integrity and connectivity, are resilient to disturbance, maintain water quality and quantity, recharge aquifers, and maintain riparian communities.

WATER TABLE: The surface in a groundwater body where the water pressure is atmospheric. It is the level at which water stands in a well that penetrates the waterbody just far enough to hold standing water.

WATERWAY: Any body of water including lakes, rivers, streams, and ponds whether or not they contain aquatic life.

WELL COMPLETION: See **completion**.

WELL LIFE: For the purposes of this plan, the well life is defined as from the time the well is drilled until the final abandonment of the well is approved.

WETLANDS: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and which, under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

WILD AND SCENIC STUDY RIVER: Rivers identified in Section 5 of the WSRA for study as potential additions to the NWSRS. The rivers shall be studied under the provisions of Section 4 of the WSRA.

WILDCAT WELL: An exploratory well drilled in an area with no oil or gas production (see exploration well).

WILDERNESS: A Congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that:

- generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable;
- has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
- has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and
- may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

WILDERNESS CHARACTERISTICS: Key characteristics of a wilderness listed in section 2(c) of the Wilderness Act of 1964 and used by BLM in its wilderness inventory. These characteristics include size, naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive and unconfined type of recreation, and special features.

WILDERNESS STUDY AREA (WSA): An area determined to have wilderness characteristics. WSAs are submitted to the President and Congress for wilderness designation. These areas are an interim designation, valid until either designated as wilderness or released to multiple-use management.

WILDFIRE: Unplanned ignitions or prescribed fires that are declared wildfires.

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WILDFIRE MANAGEMENT TO MEET OBJECTIVES: The application of the management response to naturally ignited wildland fire to accomplish specific resource management objectives in predefined designated areas outlined in fire management plans. Operational management is described in an implementation plan.

WILDLAND FIRE: A general term describing any non-structure fire that occurs in the wildland. Consist of two categories: wildfires, which are unplanned ignitions, or prescribed fires, which are planned ignitions.

WILDLAND URBAN INTERFACE: The line, area, or zone where structures and other human developments meet or intermingle with undeveloped wildland or vegetative fuels.

WILDLIFE HABITAT:

- a species-specific environment and environmental conditions suitable for occupancy by that species; or
- a particular land cover type that provides an environment and environmental conditions suitable for occupancy by many species.

WILD RIVER: Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

WILD, SCENIC, OR RECREATIONAL RIVER: The three classes of what is traditionally referred to as a wild and scenic river. Designated river segments are classified as wild, scenic or recreational, but the segments cannot overlap.

WINDMILL, AERATOR (FISH AND WILDLIFE, AQUATICS): Windmill aeration system that captures the natural power of wind. This wind energy powers a turbine that forces air through an air-line to the bottom of the sport fishing pond, thereby providing a source of dissolved oxygen to the pond.

WIND POWER CLASSES: As a renewable resource, wind is classified according to wind power classes, which are based on typical wind speeds. These classes range from Class 1 (the lowest) to Class 7 (the highest). In general, at 50 meters, wind power Class 4 or higher can be useful for generating wind power with large turbines. Class 4 and above are considered good resources.

WINTER RANGE: Range that is grazed during winter.

WITHDRAWAL: An action that restricts the use of public lands by removing them from the operation of some or all of the public land or mining laws.

WOODLAND: A forest community occupied primarily by noncommercial species such as juniper, mountain mahogany, or quaking aspen groves; all western juniper forestlands are classified as woodlands, since juniper is classified as a noncommercial species.

WORKOVER: To perform one or more remedial operation on a producing well to increase production. Deepening, plugging back, pulling, and resetting the liner are examples of workover operations.